NOAA Teacher at Sea Program Lesson Plan

Activity Title: If I Worked On a NOAA Ship

Subject (Focus/Topic): NOAA Careers

Grade Level: 3rd-5th Grade

Average Learning Time: 4 one-hour sessions

Lesson Summary (Overview/Purpose): Students will learn more about possible careers on NOAA ships by choosing a career, writing about it, and creating art to contribute to a class book.

Overall Concept (Big Idea/Essential Question): This lesson will help students understand that there are several opportunities available for employment on NOAA ships. It will give students the chance to consider their strengths and interests while focusing on a career of their choice.

Specific Concepts (Key Concepts):

- There are several positions for employment available on a NOAA ship
- All positions on NOAA ships require education beyond high school
- Employees on NOAA ships have a variety of responsibilities

Focus Questions (Specific Questions):

- What are some of the jobs on a NOAA vessel?
- What are the qualifications for engineer, deckhand, officer, steward, scientist, etc.?
- What are the responsibilities for engineer, deckhand, officer, steward, scientist, etc.?

Objectives/Learning Goals:

- Students will identify the different departments of employment on NOAA ships
- Students will identify a possible career on a NOAA ship that they are interested in and describe the career in writing and art
- Students will create a page(s) for a collaborative book project

Background Information: Students should be familiar with the overall mission of NOAA and be familiar with the types of vessels and research missions within NOAA.

Common Misconceptions/Preconceptions: Students might not be aware of the variety of jobs available on a NOAA ship. They might not understand the complexity of planning and completing a research mission.

Materials: student note-taking sheet, web resources on NOAA job opportunities, paint (or, material of choice), paper, "Teacher at Sea" picture book(s) http://teacheratsea.noaa.gov/books/

Technical Requirements: Internet access, computer, projector or interactive whiteboard, website to create a book (Blurb, Snapfish, Kodak, Storybird, etc.)
*A book could also be handmade and bound.

Teacher Preparation:
Teacher will need to

- Create note-taking handouts applicable to their students' abilities and experience
- Secure media center/library, etc. for computer time
- Preview and bookmark web resources for research
- Preview bookmaking website, if desired

Keywords:
Engineer
Steward
Crew
Officer
Scientist

Lesson Procedure:
Session One:

1. Read *Teacher at Sea* picture book aloud to students. (Or, read sections from different versions of the book. Choose sections that highlight different crew at work.)
2. Afterwards, ask students to identify the different jobs that crew might have aboard a NOAA vessel.
3. Discuss and define the departments on a NOAA ship: NOAA Corp Officers,

Engineering, Deck, Steward, Survey, Scientist

Session Two:

1. Divide students into groups to research one NOAA career/department. Or, research each career together as a class. (You might want to create note-taking sheets for this part. You might want to bookmark Internet resources for students.)
2. Gather information about what skills are needed and what the responsibilities are for each career. Use books, videos, *Teacher at Sea* Blog posts, etc. to conduct research. If possible, invite people into your classroom who have worked in the marine career field to speak about their experiences.

Sessions Three and Four:

1. Ask students to choose a career on a NOAA ship that interests them.
2. Explain that they will write a short essay explaining why they are interested in this career, why they would be good at it, what kind of education they would need, and why working at sea would interest them.
3. Afterwards, they can create a painting, drawing, etc. illustrating their chosen career.
4. Compile all of these essays and art into a class book. Create class book using online bookmaking website.

Assessment and Evaluation:

You can assess student essays describing their chosen career.

Standards Addressed:

National Science Education Standards

N/A

ISTE's NETS for Students

2. Communication and Collaboration: Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

3. Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.

Ocean Literacy Principles
Principle 7

- Fundamental Concept f. Ocean exploration is truly interdisciplinary. It requires new ways of thinking and close collaboration among biologists, chemists, climatologists, computer programmers, engineers, geologists, meteorologists and physicists.

Alaska Education Standards

Writing

W1.1 Write about a Topic

W1.2 Write for a specific audience, including self, other children, parents and other adults

Technology

A. A student should be able to use technology to explore ideas, solve problems, and derive meaning

D. A student should be able to use technology to express ideas and exchange information

Additional Resources:
Teacher at Sea Blogs with interviews of crew:
http://teacheratsea.wordpress.com/category/noaa-teacher-at-sea-2/kaci-heins/

http://teacheratsea.wordpress.com/category/noaa-teacher-at-sea-2/anne-artz/

http://fish250.blogspot.com/p/meet-crew.html

Websites for Marine Careers
(NOAA) http://www.moc.noaa.gov/shipjobs/index.html

(COSEE) http://www.oceancareers.com/2.0/index.php

(Sea Grant) http://www.marinecareers.net/

(Bridge) http://www2.vims.edu/bridge/search/bridge1output_menu.cfm?page_no=1

Websites/Examples of Book

(Example of student-made book about NOAA careers)
http://www.blurb.com/bookstore/invited/2320986/63b3075242a2dc99b815be08781090f37510d620

(Blurb) http://www.blurb.com
(Snapfish) http://www5.snapfish.com/snapfish/welcome
(Kodak) http://www.kodak.com/ek/US/en/Home.htm
(Storybird) http://storybird.com

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